

REMARKS

THE CLAIM AMENDMENTS

Claims 48 and 49 have been amended to replace the term "preventing" (skin aging in a subject) with the term –delaying the onset-- (of skin aging in a subject). Support for this change is found in the specification at *inter alia*, page 10, lines 16-22; page 11, lines 17-27; page 30, lines 10-20; and page 47, line 21 to page 48, line 13.

Claim 55 has been amended to clarify the recitation contained therein by removing the first instance of the word "attenuating."

Claims 59 and 60 have been added to recite additional embodiments of the invention. Support for new claims 59 and 60 is found in the specification at *inter alia*, page 9, lines 7-8; page 49, lines 23-24; and page 69, line 16 (and the text associated with the foregoing sections).

THE ACCOMPANYING INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement submitting the Office Action in the related patent application identified by USSN 10/526,387 accompanies this filing. Applicant also takes this opportunity to inform the Examiner of the recently filed related patent application identified by USSN 12/263,114, which is a continuation application of USSN 10/526,287, the latter of which was abandoned in favor of the continuation application.

WRITTEN DESCRIPTION REJECTION

Claims 48, 49, and 53 stand rejected under 35 U.S.C. § 112, first paragraph, as lacking an adequate written description. This rejection is respectfully traversed.

In the Office Action under reply, the Examiner takes the position that the claims contain subject matter that is described in the specification in such a way as to reasonably convey to one of ordinary skill in the art that at the time the application was filed, the inventor had possession of the claimed invention. The Examiner adds that skin aging or dermatological conditions cannot be prevented and alleges that there is no evidence that one would never get skin aging by consuming the claimed plant extracts of *Chenopodium quinoa*. The Examiner states that unless applicant can show on the record that skin aging would be completely prevented in every instance, applicant is requested to delete the word “preventing” from the claims. The Examiner

indicates that this rejection is maintained for the reasons of record set forth in the previous Office Action and that applicants' arguments from the prior response have been fully considered but were not deemed to be persuasive.

Applicant respectfully traverses the Examiner's rejection and maintains for the reasons set forth in applicant's previous correspondence of May 9, 2008, that the instant specification not only fully describes skin aging, as noted by the Examiner, but also fully describes the prevention of skin aging. Solely in order to advance prosecution of the instant application, applicant has, however, amended independent claim 48 to recite a method for "attenuating or ~~preventing~~ delaying the onset of skin ageing in a subject..." Applicant has likewise amended independent claim 49, upon which claim 53 depends, to recite a method for "treating or ~~preventing~~ delaying the onset of a dermatological condition in a subject..." Support for these amendments can be found throughout the application as filed.

Applicant asserts that claims 48, 49 and 53, submitted herewith, comply with 35 U.S.C. 112, first paragraph, and, therefore, respectfully requests the withdrawal of this rejection.

ENABLEMENT REJECTION

Claims 48, 49, and 53 stand rejected under 35 U.S.C. § 112, first paragraph, as not enabling. This rejection is respectfully traversed.

In the Office Action under reply, the Examiner takes the position that the specification, while being enabling for treating skin aging, does not reasonably provide enablement for preventing skin aging. The premise of the enablement rejection is that one of skill would have to undergo undue experimentation in order to determine if the claimed plant extracts of *Chenopodium quinoa* would completely prevent every instance of skin aging. The Examiner states that unless applicant can show on the record that skin aging would be completely prevented in every instance, applicant is requested to delete the word "preventing" from the claims. The Examiner indicates that this rejection is maintained for the reasons of record set forth in the previous Office Action and that applicants' arguments from the prior response have been fully considered but were not deemed to be persuasive.

Applicant respectfully traverses the Examiner's rejection and maintains for the reasons set forth in Applicant's previous correspondence of May 9, 2008, that the instant specification is fully enabling not only for treating skin aging, as noted by the Examiner, but also for preventing

skin aging. Solely in order to advance prosecution of the instant application, applicant has, however, amended independent claim 48 to recite a method for “attenuating or ~~preventing~~ delaying the onset of skin ageing in a subject....” Applicant has likewise amended independent claim 49, upon which claim 53 depends, to recite a method for “treating or ~~preventing~~ delaying the onset of a dermatological condition in a subject....” Support for these amendments can be found throughout the application as filed.

Applicant asserts that claims 48, 49 and 53, submitted herewith, comply with 35 U.S.C. 112, first paragraph, and, therefore, respectfully requests the withdrawal of this rejection.

CLAIM REJECTION UNDER 35 U.S.C. § 103

Claims 26, 30-33, 35, and 45-58 stand rejected under 35 U.S.C. § 103(a) as obvious over JP 2000336024A in view of Diot (FR 2760746). This rejection is respectfully traversed.

In the Office Action under reply, the Examiner states that JP 2000336024A teaches cosmetic (dermatological) compositions containing one or more humectant plant extracts of *Chenopodium quinoa* etc for dry skin. Based upon this teaching, the Examiner takes the position that the composition disclosed by JP 2000336024A is not precluded from carrying out the intended function of the claims because the referenced composition comprises one and the same ingredient disclosed by applicant as having the claim-designated functions. The Examiner acknowledges that JP 2000336024A does not teach that the plant material from *Chenopodium quinoa* comprises *Chenopodium quinoa* seeds.

The Examiner states that Diot teaches a cosmetic composition comprising amino acid derivative from seeds of *Chenopodium quinoa*. Based upon this teaching, the Examiner takes the position that it would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to include the seeds of *Chenopodium quinoa* in the cosmetic composition since Diot teaches a cosmetic composition comprising amino acid derivative from seeds of *Chenopodium quinoa*. The Examiner further provides that because both compositions yielded beneficial results in the cosmetic industry, one of ordinary skill in the art would have been motivated to make the modifications and that, from the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

Applicant respectfully traverses the Examiner's rejection for the following reasons. Firstly, as outlined in applicant's previous correspondence of May 9, 2008, the problem to be solved by JP 2000336024A, as clearly stated at page 2 of the translated version of this document, is to provide a cosmetic composition that has sustained moisture-retention effects over extended periods. As described at pages 24-25 of the translated version of JP 2000336024A, the intrinsic mechanism/pathway for the moisturizing effect of the described *Chenopodium quinoa* plant extract is through its ability to act effectively as a "barrier" thereby retaining moisture in the epidermal, or surface, layer of the skin. In contrast, matrix metalloproteases, including MMP-9, exert their activity at the cellular level, in particular within the extracellular matrix (ECM), which is also the location of the skin structural component, collagen (see, for example, page 2, lines 1-11, of the instant application). Applicant reiterates that it is well-known in the art that the ability of a compound or composition to moisturize the skin is not necessarily an indication that the compound/composition inhibits MMP-9 or induces collagen production and that, as such, the fact that a plant extract is described as having a moisturizing effect on the skin in no way renders obvious its ability to inhibit MMP-9 activity and/or to induce collagen production and thus to affect processes which depend on these activities, such as the formation of wrinkles, loss of elasticity, inflammation, and the like.

Moreover, applicant notes that pending independent claims 47, 48 and 49 are directed to methods that rely on the above-noted abilities of the recited plant extracts. In this regard and in view of the fact, as noted above, that nothing in JP 2000336024A teaches or suggests that a *Chenopodium quinoa* plant extract is capable of inhibiting MMP-9 activity and inducing collagen production, applicant strongly asserts that the skilled artisan would not have a reasonable expectation that a *Chenopodium quinoa* plant extract could be used successfully in the claimed methods, which utilize these activities of the plant extract.

Applicant further asserts that Diot does not correct the deficiencies of JP 2000336024A. Diot describes compositions comprising derivatives of amino acids or short peptides that are prepared by partial or total hydrolysis of proteins obtained from *Chenopodium quinoa* seeds and subsequently acylated with a 1 to 30 carbon acyl radical. Diot describes that the compositions may be useful in the areas of cosmetics, hygiene, therapeutics and agriculture (see English Abstract provided by Examiner). As is the case with JP 2000336024A, nothing in Diot teaches

or suggests that a plant extract from *Chenopodium quinoa* is capable of inhibiting MMP-9 activity and inducing collagen production.

Moreover, applicant submits that Diot does not in fact relate to plant extracts. Applicant is providing herewith a full copy of Diot, together with an English translation of the relevant sections referenced below. As noted above, Diot is concerned with chemically modified amino acids or peptides that are obtained by hydrolysis of proteins from *Chenopodium quinoa* seeds. As described in Diot, it is the chemical manipulation of the proteins obtained from *Chenopodium quinoa* seeds, *i.e.* the hydrolysis of the proteins and the subsequent chemical derivatisation of the resultant amino acids/peptides, that confers the required properties on the compositions described in Diot (see page 1, lines 1 to 6 and 10 to 14, and page 3, line 41 to page 4, line 26 of Diot). As specified at page 4, lines 10-16, for cosmetic purposes, the presence of significant amounts of acylated serine, preferably in the form of palmitoylated serine, is important as this confers on the compositions anti-dehydrating and anti-toxic properties. Applicant asserts that, as such, Diot in fact teaches away from using plant extracts *per se*, and instead teaches that in order to obtain any products with useful properties, a number of chemical manipulations are required to alter the proteins obtained from the plant from their native state. In view of the foregoing, applicant asserts that one of skill in the art having reference to Diot would not expect an extract from *Chenopodium quinoa* seeds to have any useful properties until it had been taken through a number of chemical manipulations to alter the form of the proteins in the extract. In contrast, the instant application demonstrates that a plant extract prepared by solvent extraction of plant material, in and of itself, has useful properties, which have not been previously described, and as such can be used directly in compositions for dermatological applications.

For the reasons set forth above, applicant asserts that the combination of JP 2000336024A in view of Diot fails to render the subject matter of pending claims 26, 30-33, 35 and 45-55, and new claims 59 and 60, obvious and, therefore, that claims 26, 30-33, 35 and 45-60, submitted herewith comply with 35 U.S.C. 103 (a). In view of the foregoing, applicant respectfully requests that the Examiner withdraw this rejection.

CONCLUSION

With this paper, each of the Examiner's rejections have been fully addressed and overcome. Because there will be no outstanding issues for this matter upon entry of this paper, applicants respectfully request withdrawal of all claim rejections and passage of this application to issue.

Any questions regarding this paper or the application in general may be addressed to the undersigned attorney at 650-815-2604 or kcanaan@sheppardmullin.com.

Respectfully submitted,

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